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REMARKS

The Office Action of February 9, 2006, has been carefully reviewed. Claims 46, 47, 53 and 55-57 are pending in the present application.

In the Office Action, claims 46, 47, 53, and 55-57 stand rejected under 35 U.S.C. 103(a) as being obvious over Bock et al. (US 4,831,092). This rejection is respectfully traversed.

Applicants thank Examiner Hug for extending the courtesy of a telephonic interview with Applicants' representative on July 25, 2006. Applicants' representative discussed distinctions between the claimed invention and Bock, and contended that the rejection based on Bock is analogous to *In re Baird* and that Bock teaches away from the present invention. The Summary of the Interview and the issues raised by Applicants' representative are incorporated in the detailed remarks below.

The present application relates to a cationic vinyl addition polymer. The cationic vinyl addition polymer according to the present invention may be utilized as an additive in paper making, particularly for use as a drainage (e.g. dewatering) aid. For instance, Example 1 discloses a polymer P4 prepared from acrylamide, methacryloxaminopropyl trimethylammonium chloride and N-isopropyl acrylamide. In Example 5, polymer P4 is tested as a dewatering aid, showing better dewatering than the polymer Reference 2 which was prepared from acrylamide and acryloxyethyl trimethylammonium chloride and which is commonly used as a dewatering aid.

Bock relates to a polymer for use in the clean up of waste water, especially waste water containing oil. More specifically, Bock relates to a polymer comprising a non-ionic monomer, a cationic monomer and (meth)acrylamide.

The Office Action contends that the presently claimed invention is obvious over the terpolymer disclosed in col. 7 of Bock. The Office Action further contends that the monomer on the left hand side of the terpolymer is a non-ionic hydrophobic monomer

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without an aromatic group, which corresponds to (a) of claim 46. Specifically, it is the contention of the Office Action that the (left hand side) monomer is an acrylamide monomer with functional groups R<sub>1</sub> and R<sub>2</sub> attached to N, where R<sub>1</sub> can be C<sub>4</sub> and R<sub>2</sub> can be C<sub>3</sub>, and that although the claimed invention has only a C<sub>3</sub> group attached to the N, the C<sub>3</sub> group is an obvious variant of the disclosed C<sub>4</sub> group for R<sub>1</sub>. Applicants respectfully disagree.

A review of the disclosure of Bock reveals that in the formula in column 7, Bock discloses and teaches as follows, regarding the first monomer having the value x (i.e., the left hand side monomer):

*"R<sub>1</sub> is preferably a C<sub>4</sub> to C<sub>22</sub> linear or branched alky, alky/cycloalkyl, or alkylaryl group, more preferably C<sub>6</sub> to C<sub>22</sub>, and most preferably C<sub>6</sub> to C<sub>18</sub>; R<sub>2</sub> is the same or different group as R<sub>1</sub>, or hydrogen or C<sub>1</sub> to C<sub>3</sub> linear or branched alkyl group; R<sub>3</sub> is hydrogen or methyl"* (emphasis added).

It is respectfully submitted that the present case is very similar to *In re Baird*, 29 USPQ2d 1550, 1552 (Fed Cir. 1994), and that *In re Baird* is controlling law. *In re Baird* involved a prior art reference that disclosed a generic formula which includes the specific compound claimed by Baird. The Examiner contended that the claim was obvious over the reference since the claimed compound was defined when specific variables of the generic formula were selected. The Board upheld the rejection over Baird's argument that there was no motivation for one skilled in the art from the reference to select the claimed compound. The Federal Circuit agreed with Baird and reversed, holding that a disclosure of a vast number of possibilities and specific disclosures of "preferred" or "optimum" embodiments that are different from and more complex than the claimed compound, would teach one skilled in the art away from that claimed compound.

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In the instant case, Bock teaches that the R<sub>1</sub> group should more preferably have from 6 to 22 carbon atoms and most preferably from 6 to 18 carbon atoms. Moreover, in all the examples the monomer includes a C<sub>8</sub> or C<sub>12</sub> group. Applicants respectfully submit that there is no motivation or suggestion in Bock for selecting a C<sub>3</sub> group for R<sub>1</sub>, H for R<sub>2</sub> and methyl for R<sub>3</sub>, as presently claimed. Instead, Bock teaches away from the presently claimed invention and teaches and fairly suggests that R<sub>1</sub> should be a more complex structure having at least a C<sub>4</sub> and more preferably a C<sub>6</sub> or higher group, by teaching that the most preferred range for R<sub>1</sub> is 6 to 18 carbon atoms and including only C<sub>8</sub> and C<sub>12</sub> groups in the examples. *In re Baird*, 29 USPQ2d at 1552.

The Office Action points out that R<sub>1</sub> is not limited and that R<sub>1</sub> is merely preferably C<sub>4</sub>-C<sub>30</sub>. Assuming *arguendo* that this interpretation (that R<sub>1</sub> is not limited) is correct, it would mean that R<sub>1</sub> could encompass an infinite number of possibilities, including groups having in excess of 30 carbon atoms or even aromatic groups. It still does not take away from the fact that Bock teaches away from the claimed compound. The Office Action also points out that although Bock does not disclose R<sub>1</sub> as being a C<sub>3</sub>, R<sub>2</sub> can be a C<sub>3</sub>. However, in such a case (where R<sub>2</sub> is C<sub>3</sub>) the result would be that there would be both a C<sub>3</sub> group and a second group of C<sub>4</sub> or higher attached to the N.

It is respectfully submitted that absent hindsight reliance on Applicants' disclosure, Bock cannot be reasonably construed as teaching or fairly suggesting the claimed invention.

Regarding claims 56 and 57, group B of the cationic monomer for each claim is identified as being a hydroxy propylene group. However, Bock only discloses structures of a cationic monomer (the right hand side monomer in col. 7) where the equivalent of group B is a linear un-substituted C<sub>1</sub>-C<sub>6</sub> alkyl group. See col. 7, lines 56-58 of Bock. Accordingly, it is respectfully submitted that in addition to teaching away from the non-

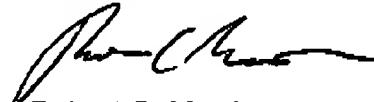
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ionic monomer as discussed above, Bock fails to disclose or suggest the claimed cationic monomer, as set forth in claims 56 and 57.

Therefore, for the reasons set forth above, it is respectfully requested that the rejections of claims 46, 47, 53 and 55-57 under 35 U.S.C. 103(a) as being unpatentable over Bock be withdrawn.

Accordingly, Applicants respectfully submit that the application, including claims 46, 47, 53 and 55-57, is in proper form for allowance, which action is earnestly solicited. If resolution of any remaining issue is required prior to allowance of the application, it is respectfully requested that the Examiner contact Applicants' undersigned attorney at the telephone number provided below.

Respectfully submitted,



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